UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,303	12/08/2000	Samuel Earl Moore	Serie 5550	2993

7590 07/08/2003

Air Liquide
Intellectual Property Department
Ste. 1800
2700 Post Oak Blvd
Houston, TX 77056

EXAMINER
DEL SOLE, JOSEPH S

ART UNIT	PAPER NUMBER
1722	9

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/733,303	MOORE, SAMUEL EARL	
	Examiner	Art Unit	
	Joseph S. Del Sole	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-25* is/are pending in the application.

4a) Of the above claim(s) *25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 6-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. In the amendment of June 10, 2003, the Applicant failed to include withdrawn claim 25 in its listing of claims. This amounts to an improper amendment with regard to the rules governing the new amendment practices. However, since the excluded claim is a withdrawn claim that the Applicant has not further addressed, the amendment has been entered. In a future amendment, a listing of the claims must include claims 1-25, with the current status of each claim.

Election/Restrictions

2. Claim 25 remains withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore, Sr. (5,320,512).

Moore, Sr. teaches a spinnerette assembly (Fig 1) having a spinnerette body (Fig 1, #12 and #14); at least one extrusion orifice (Fig 1, #26) in the spinnerette body; a hollow needle being affixed in a needle mounting hole formed in the spinnerette body

and wherein the needle mounting hole receives a portion of the hollow needle; a hollow needle (Fig 1, #18) extending through the extrusion orifice in a concentric manner to define an annular passage (Fig 1, #28) around the needle in the extrusion orifice; a bore forming fluid passage (Fig 1, #15) communicating with the interior of each hollow needle; a core forming material passage (Fig 1, #16) formed in the spinnerette assembly, wherein each material passage has a core forming material inlet port extending from a surface of the assembly to an interior of the assembly (Fig 1, the portion in #14) and a transverse passage extending from the material port to each annular passage (Fig 1, the portion bordering #12 and #14); a sheath forming material passage (Fig 1, #25), wherein the sheath forming material passage has a sheath forming port extending from a surface of the spinneret to the annular passage (Fig 1, since the sheath forming material passage cannot originate inside of the spinneret, it must originate at the surface); the transverse portion is a backcut portion of the material passage that entirely surrounds the needle in a continuous manner and is in communication with the extrusion orifice; the material port extends substantially parallel to the extrusion orifice and the transverse passage extends substantially perpendicular to the material port (as shown by the portion of the transverse passage that follows a line between #12 and #14); the spinnerette assembly comprises a spinneret body (Fig 1, #12 and #14) and a bottom plate (Fig 1, #10) separated from each other by a shim (Fig 1, #20) disposed between the spinneret body and the bottom plate; the needle is affixed in a needle mounting hole formed in the spinnerette body and receiving a portion of the needle (Fig 1); the needle mounting hole is in communication with the bore

forming fluid inlet port at a surface of the spinnerette body via the bore forming fluid passage (Fig 1); the bore forming fluid passage has a first bore forming fluid conduit coaxial with the needle and in communication with the needle (Fig 1, the portion of the passage in the hold around the needle) and a second bore forming fluid conduit that extends at an angle with respect to the first bore forming fluid conduit from the bore forming fluid conduit to a surface of the spinnerette body (Fig 1); the extrusion orifice extends through portions of the spinnerette body and the bottom plate; the material passage is formed in the spinnerette body; and a gap (Fig 1, #30) between the spinnerette body and the bottom plate defines a portion of the sheath forming material passage.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512) in view of Ando et al (3,849,044).

Moore, Sr. teaches the apparatus as discussed above.

Moore, Sr. fails to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in

communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Moore, Sr. with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate as taught by Ando et al because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

7. Claims 12-15 and 17-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512).

Moore, Sr. teaches the limitations of the apparatus of claims 12-15 and 17-21 and 23 as discussed above in the rejection of claims 1-10 as anticipated by Moore, Sr. as far as those limitations that are duplicated in both sets of claims. Moore, Sr. further

teaches sheath forming material passage having a sheath forming material inlet port situated at an exterior surface of the bottom plate (Fig 1, #25) in communication with a channel formed in the bottom plate, the channel being in communication with the gap defined between the bottom plate and the plate above it.

Moore, Sr. fails to teach a second sheath forming material passage, wherein the second sheath forming material passage has a second sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a middle plate between the spinnerette body and the bottom plate; a first shim between the spinnerette body and the middle plate and a second shim between the middle plate and the bottom plate; the gap between the spinnerette body and the middle plate defining a portion of the first sheath forming material passage; a gap between a middle plate and the bottom plate defining a portion of the second sheath forming material passage.

Regarding claims 12-15, 17-21 and 23, the mere duplication of parts, in this instance having a second sheath forming material passage, a middle plate and a second shim, has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). The added limitations merely duplicate the sheath forming structures already taught by Moore, Sr. for the purpose of forming a fiber with an additional core, this is an obvious modification. Likewise, had the Applicant claimed third, fourth, fifth and sixth sheath forming material passages it would not have been necessary to find these in the prior art.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512) in view of Ando et al (3,849,044).

Moore, Sr. teaches the apparatus as discussed above.

Moore, Sr. fails to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the plate below it.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and a bottom plate (the plate below it) for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Moore, Sr. with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate because it enables the

efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, Sr. (5,320,512) in view of Ogata (3,526,571).

Moore, Sr. teaches the apparatus as discussed above.

Moore, Sr. fails to teach multiple transverse passages and extrusion orifices for each core forming material port.

Ogata (3,526,571) teaches the use of multiple traverse passages and extrusion orifices for a single core forming material port (Fig 1) for the purpose of forming multiple fibers simultaneously (col 2, lines 33-60).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Moore, Sr. with multiple traverse passages and extrusion orifices for a single core forming material port as taught by Ogata because it enables multiple fibers to be formed simultaneously.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-4, 6-9 and 24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 6-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512).

Claims 1-4 and 6-10 of 09/733,304 teach the limitations of the apparatus of current claims 1-4, 6-9 and 24 as far as those limitations that are duplicated in both sets of claims.

Claims 1-4 and 6-10 of 09/733,304 fail to teach a sheath forming material passage, wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a shim between the spinnerette body and the bottom plate; and a gap between the spinnerette body and the bottom plate defining a portion of the sheath forming material passage.

Moore, Sr. teaches a sheath forming material passage (Fig 1, #25), wherein the sheath forming material passage has a sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a shim (Fig 1, #20) between the spinnerette body and the bottom plate; and a gap (Fig 1, #30)between the spinnerette body and the bottom plate defining a portion of the sheath forming material passage for the purpose of forming a hollow fiber with a sheath and a core (col 2, lines 25-39).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of claims 1-4 and 6-10 of 09/733,304 with the sheath structures as taught by Moore, Sr. because it enables a hollow fiber to be formed that has a multicomponent sheath and core.

This is a provisional obviousness-type double patenting rejection.

12. Claim 11 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 6-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512) and further in view of Ando et al (3,849,044).

Claims 1-4 and 6-10 of 09/733,304 and Moore, Sr. teach the apparatus as discussed above.

Claims 1-4 and 6-10 of 09/733,304 fail to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Claims 1-4 and 6-10 of 09/733,304 with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate as taught by Ando et al because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

This is a provisional obviousness-type double patenting rejection.

13. Claims 12-15, 17-21, 23 and 24 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 6-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512).

Claims 1-4 and 6-10 of 09/733,304 and Moore, Sr. teach most of the limitations of the apparatus of claims 12-15 and 17-21 as discussed above in the rejection of claims 1-10 over claims 1-10 of 09/733,304 in view of Moore, Sr. as far as those limitations that are duplicated in both sets of claims. Moore, Sr. further teaches sheath forming material passage having a sheath forming material inlet port situated at an exterior surface of the bottom plate (Fig 1, #25) in communication with a channel formed in the bottom plate, the channel being in communication with the gap defined between the bottom plate and the plate above it.

Claims 1-4 and 6-10 of 09/733,304 fail to teach a second sheath forming material passage, wherein the second sheath forming material passage has a second sheath forming material port extending from a surface of the spinnerette assembly to each annular passage; a middle plate between the spinnerette body and the bottom plate; a first shim between the spinnerette body and the middle plate and a second shim between the middle plate and the bottom plate; the gap between the spinnerette body and the middle plate defining a portion of the first sheath forming material passage; a gap between a middle plate and the bottom plate defining a portion of the second sheath forming material passage.

Regarding claims 12-15, 17-21 and 23, the mere duplication of parts, in this instance having a second sheath forming material passage, a middle plate and a second shim, has no patentable significance unless new and unexpected results are produced. In re Harza, 124 USPQ 378 (CCPA 1960). The added limitations merely duplicate the sheath forming structures already taught by Moore, Sr. for the purpose of forming a fiber with an additional core, this is an obvious modification. Likewise, had the Applicant claimed third, fourth, fifth and sixth sheath forming material passages it would not have been necessary to find these in the prior art.

This is a provisional obviousness-type double patenting rejection.

14. Claim 22 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 09/733,304 in view of Moore, Sr. (5,320,512) and further in view of Ando et al (3,849,044).

Claims 1-4 and 6-10 of 09/733,304 and Moore, Sr. teach the apparatus as discussed above in paragraph 22 of this Office action.

Claims 1-4 and 6-10 of 09/733,304 fail to teach the sheath forming material passage having a sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate.

Ando et al teach the sheath forming material passage having a sheath forming material port (Fig 12, #7) situated at an exterior surface of the spinnerette body (Fig 12, where 'B' is supplied) in communication with a channel formed in the spinnerette body (Fig 12, #7), the channel is in communication with the gap defined between the spinnerette body and the bottom plate for the purpose of forming a fiber with multi cores and a sheath using the same material for the inner core and the sheath.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Claims 1-4 and 6-10 of 09/733,304 with the sheath forming material port situated at an exterior surface of the spinnerette body in communication with a channel formed in the spinnerette body in communication with a channel formed in the spinnerette body, the channel in communication with the gap defined between the spinnerette body and the bottom plate as taught by Ando et al because it enables the efficient, cost-saving arrangement of a single source providing the material for both the inner of two cores and a sheath.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

15. The Applicant has overcome the claim objections and the claim rejections under 35USC112.

16. Applicant's arguments filed 6/10/03 have been fully considered but they are not persuasive.

The Applicant argues that the amendments to independent claims 1 and 12 overcome the rejection over Moore, Sr '512.

The Examiner disagrees. As discussed above, Moore, Sr '512 teaches a spinnerette body (Fig 1, #12 and #14) and a hollow needle being affixed in a needle mounting hole formed in the spinnerette body, etc. The Applicant's claim as currently written does not preclude a spinnerette body comprised of two structures together.

The Applicant argues that Ando et al '044 fail to cure the deficiency of claims 11 and 22 with respect to Moore, Sr. '512 because the design of Ando et al actually directs the sheath forming material into two separate channels with the spinnerette body and that only a portion of the sheath forming material is directed into the channel formed in the spinnerette body.

While the Examiner agrees that the sheath forming material of Ando et al is directed into two separate channel, the point is moot. Ando et al still teaches an inlet port in communication with a channel formed in the spinnerette body, the channel being in communication with the gap defined between the spinnerette body and the bottom plate. That Ando et al teaches more than is claimed does not preclude Ando et al teaching the claimed subject matter that the invention is comprised of.

The Applicant argues that the rejection over Kinkead '034 of claims 1-11 is overcome by the amendments to claim 1.

The Examiner agrees and the rejection over Kinkead '034 has been overcome.

The Applicant argues that based on the current amendments, the provisional double patenting rejections should be withdrawn.

The Examiner disagrees. The Amendments made to the current application were identically made to the application upon which double patenting is based, and therefore double patenting still exists.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (703) 308-6295. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non-after finals and (703) 872-9311 for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Joseph S Del Sole

J.S.D.
July 7, 2003

ROBERT DAVIS
PRIMARY EXAMINER
GROUP ~~1300~~ 1700

7/7/03